

REMARKS

Claims 1-24 are pending in this application, of which claims 1 and 22-24 are independent. Applicants acknowledge, with appreciation, the Examiner's allowance of claims 23 and 24. Applicants also acknowledge, with appreciation, the Examiner's indication that claims 4-6, 9, 11 and 14 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In this Amendment, claims 1, 3, 4, 5, 7-15, 17-19 and 22 have been amended. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the amendments of claims 1 and 22 should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification. Claims 4, 5, 9, 11 and 14, indicated to be allowable, have been amended to be in independent form. Claims 3, 7, 8, 10, 12, 13, 15 and 17-19 has been amended to improve wording.

Claims 1, 2, 7, 8, 10, 12, 13, 15-20 and 22 have been rejected under 35 U.S.C. §102(b) as being anticipated by Sugiura.

The Examiner maintained her position on the rejection of these claims under 35 U.S.C. §102(b). In response, Applicants have amended independent claims 1 and 22, reciting that the contour detecting means is configured for detecting probable edge points thought to be a document edge point, and an edge point of a projecting area where a light source outside the apparatus is projected. The claims further recite that the contour correction means is configured for determining whether each probable edge point is the edge point of the projecting area, and

recognizing the probable edge points except the edge point of the projecting area as the document edge points.

Sugiura does not disclose, at minimum, detecting the projecting area wherein the shape of light source outside the apparatus is projected. Sugiura detects edge points of a document and edge points of an image area in the document. Neither the edge points of the document nor the edge points of the image area in the document are the edge points of the projecting area.

In Sugiura, the edge points of the image area in the document are determined by detecting the density changes from the white level to the back level (column 5, line 52 to column 7, line 26). When the change of the density from the white level to the black level is detected in step P110 of Fig. 6(a), it is decided in step P121 that the present position of the pointer is set to a left edge of the image area (column 6, lines 51 to 58). In addition, when the change of the density from the white level to the black level is detected in step P140 in Fig. 6(b), it is decided in step P151 that the present position of the pointer is set to a right edge of the image area (column 7, lines 23 to 26). The right and left edges are not the edges of the document, but the edges of the image area in the document (column 5, line 67 to column 6, line 6).

In Sugiura, the edge of the document is decided by detecting the change of the density from the black level to the white level (column 5, line 52 to column 7, line 11). When the change of the density from the black level to the white level is detected in step P102 in Fig. 6(a) (column 6, lines 29 to 43), the left edge of the image area in the document is determined in the step following the step P110. Furthermore, when the change of the density from the black level to the white level is detected in step P132 of Fig. 6(b) (column 6, line 64 to column 7, line 11), the right edge of the image area in the document is determined in the step following step P140. Sugiura in column 5, lines 61 to 65 describes that the surrounding area of the document is the

black frame. In steps P100 and P130, the positions of the pointers are set to the top position and the bottom end of the CCD 20, respectively (column 6, lines 22 to 26; and column 6, lines 61 to 63). As far as the document does not reach from the top position to the bottom end of the CCD 20, the black level outside the document is detected before the white level in the document is detected.

Based on the above discussion, as well as Fig. 2 of Sugiura, it is apparent that neither the edge of the document nor the edge of the image area in the document is the edge of the projection area. “The location of the edge of a document” in column 5, lines 57 to 58 of Sugiura is the point where the density changes from the white level to the black level, and indicates the edge of the image area in the document.

Moreover, even if Sugiura detects the change of the density from the black level to the white level in steps P102 and P132, Sugiura does not teach how to determine the edge of the document by excluding the edge points of the projecting area from the detected points, as claimed. When Sugiura detects the change of the density from the black level to the white level, it determines whether the point is the edge of the image area in the document as mentioned above. However, Sugiura does not determine whether the detected point is the edge of the document. As shown in Figs. 1 and 6 of the present application, the projecting area 103 may extends from the document area 104. It is, thus, necessary to determine whether the detected points are the edge points of the document by excluding the edge points of the projecting area from the detected points, as claimed. Sugiura does not disclose what is claimed.

Based on the foregoing, Applicants submit that Sugiura does not identically disclose an image reading apparatus and a processing apparatus including all the limitations recited in independent claims 1 and 22, respectively, within the meaning of 35 U.S.C. §102. Dependent

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claims 2, 7, 8, 10, 12, 13 and 15-20 are also patentably distinguishable over Sugiura at least because these claims respectively include all the limitations recited in independent claim 1. Applicants, therefore, respectfully solicit withdrawal of the rejection of claims 1, 2, 7, 8, 10, 12, 13, 15-20 and 22 under 35 U.S.C. §102(b) for lack of novelty as evidenced by Sugiura, and favorable consideration thereof.

Claim 3 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Sugiura in view of Houjiyou et al.

In response, Applicants submit that claim 3 is patentably distinguishable over Sugiura and Houjiyou et al. at least because the claim includes all the limitations recited in claim 1. Specifically, Houjiyou et al. does not disclose determining whether the detected points are the edge points of the document by excluding the edge points of the projecting area from the detected points. Accordingly, Houjiyou et al. does not cure the deficiencies of Sugiura set forth above.

Applicants, therefore, respectfully solicit withdrawal of the rejection of claim 3 under 35 U.S.C. §103(a) and favorable consideration thereof.

Claim 21 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Sugiura in view of Migita et al.

In response, Applicants submit that claim 21 is patentably distinguishable over Sugiura and Migita et al. at least because the claim includes all the limitations recited in claim 1. Specifically, Migita et al. does not disclose determining whether the detected points are the edge

points of the document by excluding the edge points of the projecting area from the detected points. Accordingly, Migita et al. does not cure the deficiencies of Sugiura set forth above.

Applicants, therefore, respectfully solicit withdrawal of the rejection of claim 21 under 35 U.S.C. §103(a) and favorable consideration thereof.

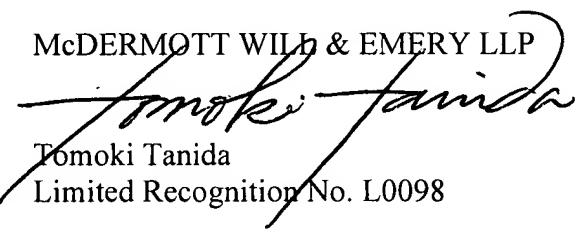
Conclusion

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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